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Titel

The Stapedius Reflex Detector (SRD): Towards the Dynamic Adaptation in Cochlea Implants

Kurzbeschreibung

Motivation: The auditory sense plays an important role in the personal communication of humans. But unfortunately, this sense might be progressively degrading due to age, injuries and other reasons. In such cases, hearing devices are common means for a relief: by providing a frequency-selective amplification of the sound signal, they help regain at least parts of this important sense. By their very nature, hearing devices fail, if too many hair cells of the cochlea are destroyed. In such cases, cochlea implants can be the last resort. In essence, a cochlea implant consists of a small number of electrodes, which are inserted into the cochlea and which can electrically stimulate the hair cells that connect to the auditory cortex. The implant's electrodes receive their stimulation input from a signal processor, which analyzes the incoming sound signals. But how to adapt the acoustic gain for a user, who has never been able to hear, or who's cochlea has accustomed to the implant's stimuli?

Förderung

- Dieses Projekt wird gefördert durch das Graduierten Kolleg Welisa (DFG)

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Veröffentlichungen (Auszug projektbezogen)

- Marian Lüder, Ralf Warmuth, Enrico Heinrich, Ralf Joost, Ralf Salomon:
  SRD - Towards a System for the In-Situ Detection of the Stapedius Reflex
  IEEE Symposium Series on Computational Intelligence (SSCI 2011), pp. 29 - 34, ISBN: 978-1-4244-9910-6 , Paris, Frankreich, April 2011

Links

- Link zur offiziellen Projektseite

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